

## AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims in the present application.

1. *(currently amended)* A composition comprising:

water;

one or more monopersulfate compounds;

one or more buffers, at least one of which is selected from the group consisting of alkali metal and alkaline earth metal salt forms of bicarbonate and/or carbonate; and

one or more ketones, at least one of said ketones being selected from the group consisting of acetone, 2-butanone, 2-pentanone, 2-hydroxy-4-methyl-2-pentanone, hexafluoroacetone, trifluoroacetone, acetophenone, camphorsulfonic acid, and levulinic acid; wherein the composition is formulated to achieve a dioxirane composition capable of in situ generation of dioxirane; and

further comprising one or more co-solvents added to said dioxirane composition, wherein the composition has a pH of from about 5 to about 9 ~~and is formulated to achieve in situ generation of dioxirane.~~

2. *(previously presented)* The composition of claim 1, wherein at least one of the monopersulfate compounds is an alkali metal salt form of monopersulfate.

3. *(canceled)*

4. *(previously presented)* The composition of claim 2, wherein at least one of the monopersulfate compounds is selected from the group consisting of alkali metal salt forms of peroxymonosulfuric acid alone or in combination with the alkali metal salts of sulfuric or persulfuric acid.

5-7. *(canceled)*

8. *(currently amended)* A composition comprising:

water;

one or more monopersulfate compounds;

one or more buffers, at least one of which is selected from the group consisting of alkali metal and alkaline earth metal salt forms of bicarbonate and/or carbonate; and

one or more ketones, at least one of said ketones being selected from the group consisting of acetone, 2-butanone, 2-pentanone, 2-hydroxy-4-methyl-2-pentanone, hexafluoroacetone, trifluoroacetone, acetophenone, camphorsulfonic acid, and levulinic acid; wherein the composition is formulated to achieve a dioxirane composition capable of in situ generation of dioxirane; and

further comprising one or more surfactants added to said dioxirane composition, wherein the composition has a pH of from about 5 to about 9 ~~and is formulated to achieve in situ generation of dioxirane.~~

9. *(previously presented)* The composition of claim 8, wherein at least one of the monopersulfate compounds is an alkali metal salt form of monopersulfate.

10. *(canceled)*

11. *(previously presented)* The composition of claim 9, wherein at least one of the monopersulfate compounds is selected from the group consisting of alkali metal salt forms of peroxymonosulfuric acid alone or in combination with the alkali metal salts of sulfuric or persulfuric acid.

12-28. *(canceled)*

29. *(previously presented)* The composition of claim 1, wherein at least one of the co-solvents is selected from the group consisting of acetonitrile, tert-butanol, propylene carbonate, propylene glycol, and polypropylene glycol.

30. *(previously presented)* The composition of claim 29, wherein at least one of the monopersulfate compounds is selected from the group consisting of alkali metal salt forms of peroxymonosulfuric acid alone or in combination with the alkali metal salts of sulfuric or persulfuric acid.

31. *(previously presented)* The composition of claims 1, 2, 4, or 29, wherein the monopersulfate compound(s) are present in a concentration range of about 0.1-40% w/v, the buffer(s) are present in a concentration range of about 0.05-20% w/v, and the ketone(s) are present in a concentration range of about 0.1-40% v/v.

32. *(previously presented)* The composition of claim 31, wherein the co-solvent(s) are present in a concentration range of about 0.01-40% v/v.

33. *(previously presented)* The composition of claim 1, 2, 4 or 29, wherein the monopersulfate compound(s) are present in a concentration range of about 1-20% w/v, the buffer(s) are present in a concentration range of about 0.05-20% w/v, and the ketone(s) are present in a concentration range of about 0.1-20% v/v.

34. *(previously presented)* The composition of claim 33, wherein the co-solvent(s) are present in a concentration range of about 0.5-20% v/v.

35. *(canceled)*

36. *(previously presented)* The composition of claim 8, wherein at least one of the surfactants is selected from the group consisting of tetrabutylammonium hydrogen sulfate (TBAHS), cetyltrimethylammonium (CTMA) chloride, and octyl phenol ethoxylate.

37. *(previously presented)* The composition of claim 36, wherein at least one of the monopersulfate compounds is selected from the group consisting of alkali metal salt forms of peroxymonosulfuric acid alone or in combination with the alkali metal salts of sulfuric or persulfuric acid.

38. *(previously presented)* The composition of claims 8, 9, 11 or 36, wherein the monopersulfate compound(s) are present in a concentration range of about 0.1-40% w/v, the buffer(s) are present in a concentration range of about 0.05-20% w/v, and the ketone(s) are present in a concentration range of about 0.1-40% v/v.

39. *(previously presented)* The composition of claim 38, wherein the surfactant(s) are present in a concentration range of about 0.01-15% w/v.

40. *(previously presented)* The composition of claims 8, 9, 11 or 36, wherein the monopersulfate compound(s) are present in a concentration range of about 1-20% w/v, the buffer(s) are present in a concentration range of about 0.05-20% w/v, and the ketone(s) are present in a concentration range of about 0.1-20% v/v.

41. *(previously presented)* The composition of claim 40, wherein the surfactant(s) are present in a concentration range of about 0.01-5% w/v.

42-47. *(canceled)*

48. *(currently amended)* The composition of claim 1, wherein

at least one of the monopersulfate compounds is selected from the group consisting of alkali metal salt forms of peroxymonosulfuric acid alone or in combination with the alkali metal salts of sulfuric or persulfuric acid; and

at least one of the co-solvents is selected from the group consisting of acetonitrile, tert-butanol, propylene carbonate, propylene glycol, and polypropylene glycol;

wherein the monopersulfate compound(s) are present in a concentration range of about 1-20% w/v, the buffer(s) are present in a concentration range of about 0.05-20% w/v, the ketone(s) are present in a concentration range of about 0.1-20% v/v, and the co-solvent(s) are present in a concentration range of about 0.5-20% v/v; ~~and~~

~~wherein the composition has a pH range between about 5 to about 9.~~

49. *(canceled)*

50. *(currently amended)* The composition of claim 8, wherein

at least one of the monopersulfate compounds is selected from the group consisting of alkali metal salt forms of peroxymonosulfuric acid alone or in combination with the alkali metal salts of sulfuric or persulfuric acid; and

at least one of the surfactants is selected from the group consisting of tetrabutylammonium hydrogen sulfate (TBAHS), cetyltrimethylammonium (CTMA) chloride, and octyl phenol ethoxylate;

wherein the monopersulfate compound(s) are present in a concentration range of about 1-20% w/v, the buffer(s) are present in a concentration range of about 0.05-20% w/v, the ketone(s) are present in a concentration range of about 0.1-20% v/v, and the surfactant(s) are present in a concentration range of about 0.01-5% w/v; ~~and~~

~~wherein the composition has a pH range between about 5 to about 9.~~

51. *(previously presented)* The composition of claims 1, 29, 48, or 49, wherein the monopersulfate derives from a potassium triple salt compound generally represented by the formula  $2\text{KHSO}_5 \cdot \text{KHSO}_4 \cdot \text{K}_2\text{SO}_4$ .

52. *(previously presented)* The composition of claims 8, 36 or 50, wherein the monopersulfate derives from a potassium triple salt compound generally represented by the formula  $2\text{KHSO}_5 \cdot \text{KHSO}_4 \cdot \text{K}_2\text{SO}_4$ .

53. (*new*) A composition consisting of:

water;

one or more monopersulfate compounds;

one or more buffers, at least one of which is selected from the group consisting of alkali metal and alkaline earth metal salt forms of bicarbonate and/or carbonate; and

one or more ketones, at least one of said ketones being selected from the group consisting of acetone, 2-butanone, 2-pentanone, 2-hydroxy-4-methyl-2-pentanone, hexafluoroacetone, trifluoroacetone, acetophenone, camphorsulfonic acid, and levulinic acid,

wherein the composition has a pH of from about 5 to about 9 and is formulated to achieve in situ generation of dioxirane.

54. (*new*) The composition of claim 53, wherein at least one of the monopersulfate compounds is selected from the group consisting of alkali metal salt forms of peroxymonosulfuric acid alone or in combination with the alkali metal salts of sulfuric or persulfuric acid.

55. (*new*) The composition of claims 53, wherein the monopersulfate derives from a potassium triple salt compound generally represented by the formula  $2\text{KHSO}_5 \cdot \text{KHSO}_4 \cdot \text{K}_2\text{SO}_4$ .

55. (*new*) The composition of claims 53, wherein the monopersulfate compound(s) are present in a concentration range of about 1-20% w/v, the buffer(s) are present in a concentration range of about 0.05-20% w/v, and the ketone(s) are present in a concentration range of about 0.1-20% v/v.

56. (*new*) The composition of claim 53, wherein

at least one of the monopersulfate compounds is selected from the group consisting of alkali metal salt forms of peroxymonosulfuric acid alone or in combination with the alkali metal salts of sulfuric or persulfuric acid; and

wherein the monopersulfate compound(s) are present in a concentration range of about 1-20% w/v, the buffer(s) are present in a concentration range of about 0.05-20% w/v, and the ketone(s) are present in a concentration range of about 0.1-20% v/v.